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PATENT COOPERATION TREATY

From the:
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 10 FEB 2005

Applicant's or agent's file reference
FP20892 AJFW

FOR FURTHER ACTION
See paragraph 2 below

International application No.

PCT/AU2004/001765

International filing date (day/month/year)

15 December 2004

Priority date (day/month/year)

15 December 2003

International Patent Classification (IPC) or both national classification and IPC

Int. Cl. ⁷ F03C 1/053; F16H 21/20; F16C 3/28

Applicant

HYDROSTATIC DESIGN TECHNOLOGY PTY LTD et al

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the IPEA/AU
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Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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PCT/AU2004/001765

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

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Novelty (N)	Claims 1-16	YES
	Claims	NO
Inventive step (IS)	Claims 4-14	YES
	Claims 1-3, 15, 16	NO
Industrial applicability (IA)	Claims 1-16	YES
	Claims	NO

Citations and explanations:

The following documents identified in the International Search Report have been considered for the purposes of this report:

D1 : DE 3936649A1
D2 : SU 1002611A
D3 : SU 1775007A3
D4 : SU 1789750A1
D5 : US 5588339A
D6 : JP 11190326A
D7 : DE 3711729A1
D8 : EP 0271456B1

Inventive Step (IS)

Claims 1, 15, 16

D1, D4-D8 individually disclose fluid machines with adjustable crank throws. D1 and D4 in particular shows crankshafts supporting multiple piston/cylinder arrangement. Given this disclosure, a radial arrangement of such pistons and limiting such arrangements to specified angular spacings are considered non-inventive design variations within the common general knowledge of person skilled in the art.

Claims 2, 3

D2 teaches the use of spherical bearing in an adjustable stroke piston engine and thus in obvious combination with D1, this document renders the subject matter of claim 2 lacking an inventive step over the cited art.

D3 teaches an adjustable stroke piston pump with the stroke being adjustable between zero to a maximum and thus in obvious combination with D1, this document renders the subject matter of claim 3 lacking an inventive step over the cited art.